

(iii) said helical vasoocclusion coil being further wound into a first diameter intermediate said proximal end and said distal end [(i) and (ii)]; and

42 (iv) said helical vasoocclusion coil being further wound into a second diameter smaller than said first diameter at said proximal end whereby the first coupling member is positioned radially inwardly of said first diameter such that the coil acts to occlude a vessel or a cavity within a vessel when placed within said vessel or cavity.

Applicants have amended claims 1 and 4 to clarify the statement of their invention. No new matter has been added by this amendment.

REMARKS

This invention is a straightforward one. It is a vasoocclusion coil having two ends. The primary form of the helically wound coil is then wound into a secondary form having a pair of diameters -- one smaller than the other. The coupling member on the proximal end of the coil is positioned radially inward of the secondary form of the coil.

35 U.S.C. §102(e) Rejection

Claims 1-5 stand rejected under 35 U.S.C. §102(e) as being anticipated by Dibie et al. (U.S. Patent No. 5,531,788). The Examiner comments: "Dibie et al. disclose a coil (1) with a first diameter (d3), a second diameter (d2, d4) and a coupling member (6)."

Applicants agree that Dibie et al. discloses a structure with a first and second diameter. However, there are substantial differences between the claimed invention and the Dibie et al. devices.

The structure found in claims 1 and 4 differs from the Dibie et al. devices for several reasons. First, applicants' inventive coil is, if you like, a "coil of a coil" structure whereas the Dibie et al. device is a simple single "coil of a rod" structure. Second, the claimed devices necessarily have a flexibility quite different than the Dibie et al. devices. Finally, the amended claims of the present application require a structure that acts conversely to the Dibie et al. devices; namely, applicants' coil *occludes* rather than *filters* fluid. Accordingly, the rejection should be withdrawn.

As stated in the foregoing paragraph, the structure required in applicants' amended claims is a "coil of a coil" structure. Specifically, amended claims 1 and 4 require a "helical vasoocclusion coil being further wound into a . . . diameter . . ." Thus, the structure required by the amended claims is a larger helical structure being formed by further winding a helical coil, not a straight wire like in Dibie et al. To further illustrate, consider a large helical structure formed by wrapping an already existing helical coil around a large mandrel. The resulting structure is quite accurately described as a "coil of a coil."

In contrast, Dibie et al. devices are better described as "coil of a rod" structures because a *rod* rather than a *coil* is wound. Therefore, the "coil of a coil" structure claimed by applicants cannot be anticipated by Dibie et al.

Device flexibility is yet another reason Dibie et al. fails to suggest the claimed invention. As required in amended claims 1 and 4, the coil must be *soft* and *flexible* so that the coil will occlude a vessel or fill a cavity in a vessel. In contrast, the Dibie et al. devices are not soft and flexible but stiff, acting to stretch the vessel's cross section. An example of the Dibie et al. device stretching a vessel to an elliptical shape is shown in Figure 7. Also, nowhere does Dibie et al. describe any of the specified soft coil materials disclosed in the present invention. Therefore, Dibie et al. cannot anticipate the claimed invention since Dibie et al.'s structure is stiff.

In addition to differing coil stiffness, claims 1 and 4 specify that the coil will "occlude a vessel" when placed in that vessel. In contrast, the Dible et al. devices reshape the vessel cross section, providing filtering and perhaps facilitating fluid flow. Dible et al. does not show occlusion of a vessel or of a cavity in a vessel. Moreover, Dible et al. shows filtering devices which have an appropriately opposite effect to occlusion and hence, contradict the requirements of applicants' amended claims.

Withdrawal of the rejection is appropriate and is so requested.

CONCLUSION

Applicants believe the above amendments and remarks specify the differences between the claimed invention and the cited reference, showing that the invention required by the amended claims is not found in the cited reference.

Applicants request the rejection be withdrawn for claims 1 and 4. Applicants also request withdrawal of rejection of claims 2, 3, and 5 since these claims depend from claims 1 and 4.

Applicants accordingly request the Examiner to allow claims 1-5.

Should the Examiner have any additional requests or desire to discuss the details of the invention in greater detail, he is invited to contact applicants' attorney at the number listed below. If a personal or telephone interview would be helpful, a request to the attorney would be sufficient.

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